Chapter 8. State Indicators

8-8 Eighth Grade Science Proficiency

Description

This indicator represents the proportion of a state's eighth grade students in public schools that has met or exceeded the proficiency standard in science. The National Assessment Governing Board sets performance standards that provide a context for interpreting National Assessment of Educational Progress (NAEP) results. The standards define "proficiency," as well as "advanced" and "basic" accomplishment. For the eighth grade, the basic level (scores 141–169) denotes partial mastery of knowledge and skills that are prerequisite for proficient work. The proficient level (170–214) represents solid academic performance and demonstrates competency over challenging subject-matter knowledge. The advanced level (215–300) signifies superior performance.

The National Center for Education Statistics has determined that achievement levels are to be used on a trial basis and should be interpreted with caution. However, both the Commissioner of Education Statistics and the National Assessment Governing Board state these performance standards are useful for understanding trends in student achievement.

Approximately 119,600 eighth grade students in 6,690 schools participated in the 2011 NAEP science assessment. NAEP allows students with disabilities or limited English-language proficiency to use certain accommodations (e.g., extra testing time or individual rather than group administration). All data presented here represent scores from tests taken with accommodations offered.

Findings

- In 2011, 31% of eighth grade students nationwide performed at or above the proficient level in science, compared to 29% in 2009.
- State values ranged from 19% to 45%.
- Nationally, the percentage of eighth grade white students demonstrating proficient performance in science was 43% in 2011 compared to 9% for black students, a gap of 34 percentage points, and 16% for Hispanic students, a gap of 27 percentage points, based upon the racial classifications provided by the schools. In 2009, these gaps were 33 and 29 percentage points, respectively.
- In 2011, the national average for male students was 34% compared to the average for female students of 27%. This score gap of 7 percentage points in 2011 was statistically the same as the gap in 2009.

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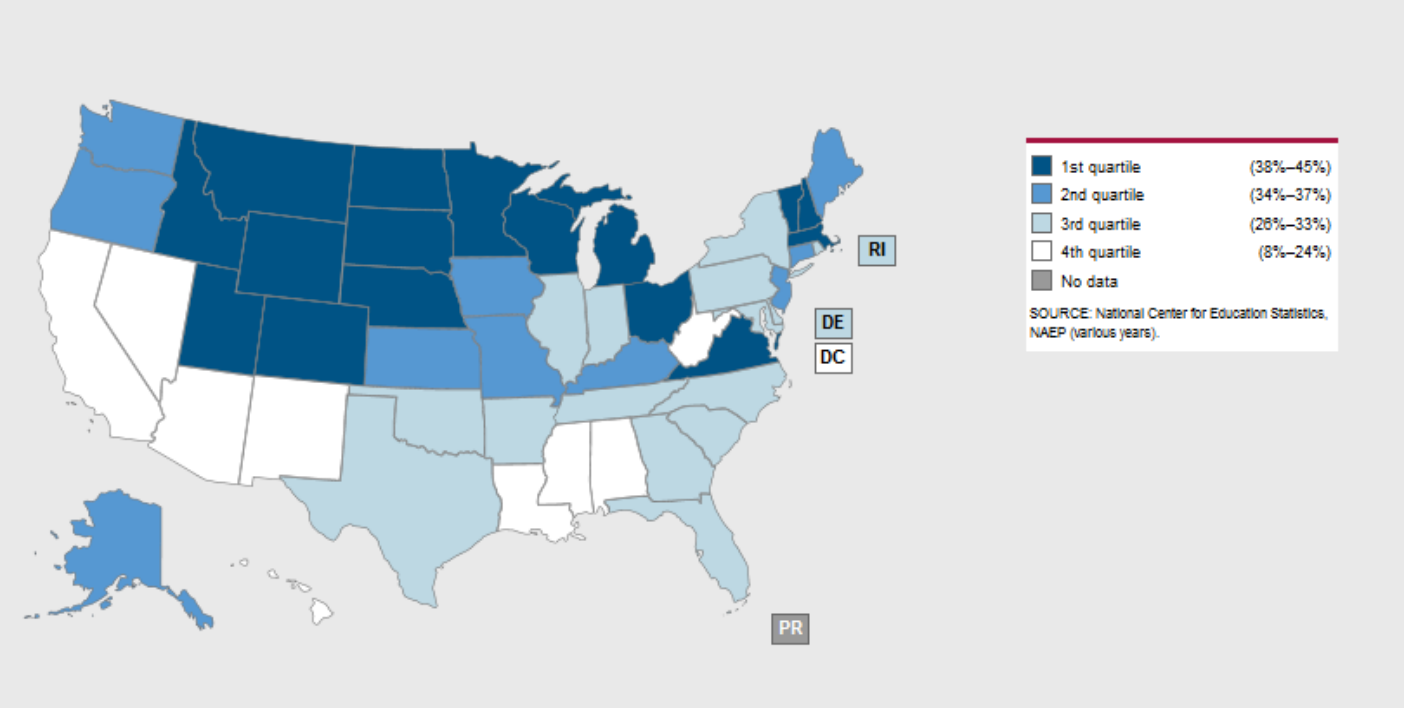
Year: 2011



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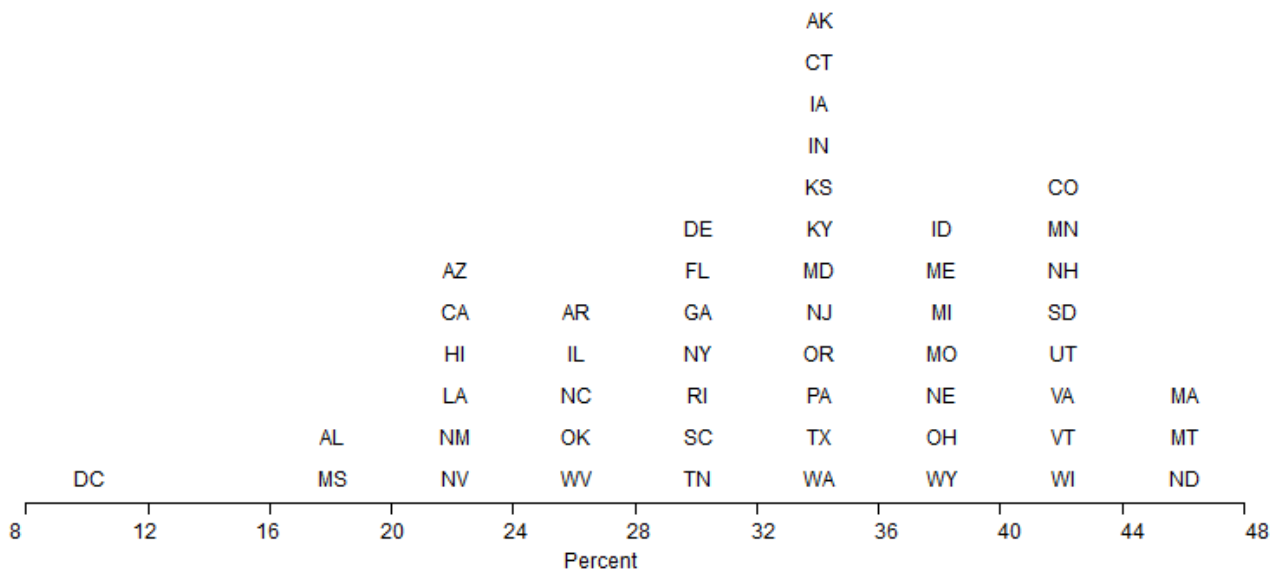
Year: 2011

Distribution of states across indicator values



Histograms do not display states with extreme values. Please consult the data tables for exact indicator values for each state.

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Table 8-8 Eighth Grade Science Proficiency

State	8th grade science proficiency, all students (Percent)	
	2009	2011
United States	29	31
Alabama	19	19
Alaska	NA	34
Arizona	22	23
Arkansas	24	26
California	20	22
Colorado	36	42
Connecticut	35	35
Delaware	25	28
District of Columbia	NA	8
Florida	25	28
Georgia	27	30
Hawaii	17	22
Idaho	37	38
Illinois	28	26
Indiana	32	33
Iowa	35	35
Kansas	NA	35
Kentucky	34	34
Louisiana	20	22
Maine	35	37
Maryland	28	32
Massachusetts	41	44
Michigan	35	38
Minnesota	40	42

State	8th grade science proficiency, all students (Percent)	
	2009	2011
Mississippi	15	19
Missouri	36	36
Montana	43	44
Nebraska	NA	38
Nevada	20	23
New Hampshire	39	42
New Jersey	34	34
New Mexico	21	22
New York	31	29
North Carolina	24	26
North Dakota	42	45
Ohio	37	38
Oklahoma	25	26
Oregon	35	35
Pennsylvania	35	33
Rhode Island	26	31
South Carolina	23	28
South Dakota	40	42
Tennessee	28	31
Texas	29	32
Utah	39	43
Vermont	NA	43
Virginia	36	40
Washington	34	35
West Virginia	22	24
Wisconsin	38	40
Wyoming	36	38
Puerto Rico	NA	NA

State	8th grade science proficiency, all students (Percent)	
	2009	2011

NA = not available.

NOTES: The National Assessment of Educational Progress (NAEP) scores are for public schools only. The national value for the United States is the reported value in the NAEP reports.

SOURCE: National Center for Education Statistics, NAEP (various years).

Science and Engineering Indicators 2016